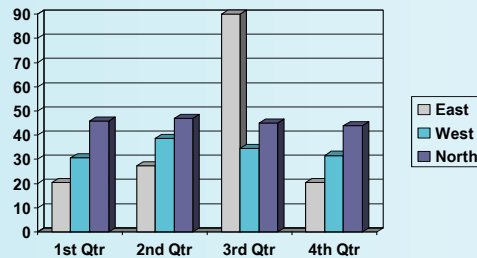


2.01 Investigate graphic image design.

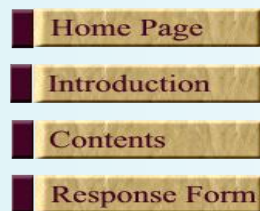
Graphic Formats

Graphics

- **Graphics** - anything on the page that is not actual text, from simple line drawings to fully active images found on the World Wide Web.
- There are many different graphic file formats.
- The format you choose depends on several factors.



Chart



Buttons



Photograph

Factors that Affect Graphic Format

- Color depth
- Compression
- Portability
- Transparency

Color Depth

- The number of colors per pixel that can be contained in an image.
- Most graphics editing programs will allow you to set the color depth for your image.
- Different graphic formats contain different numbers of colors per pixel.
- Examples:

1-bit Color	2 Colors Per Pixel
<u>8-bit Color</u>	256 Colors Per Pixel
16-bit Color	65.5 Thousand Colors Per Pixel
<u>24-bit Color</u>	16.7 Million Colors Per Pixel



Compression= Saving

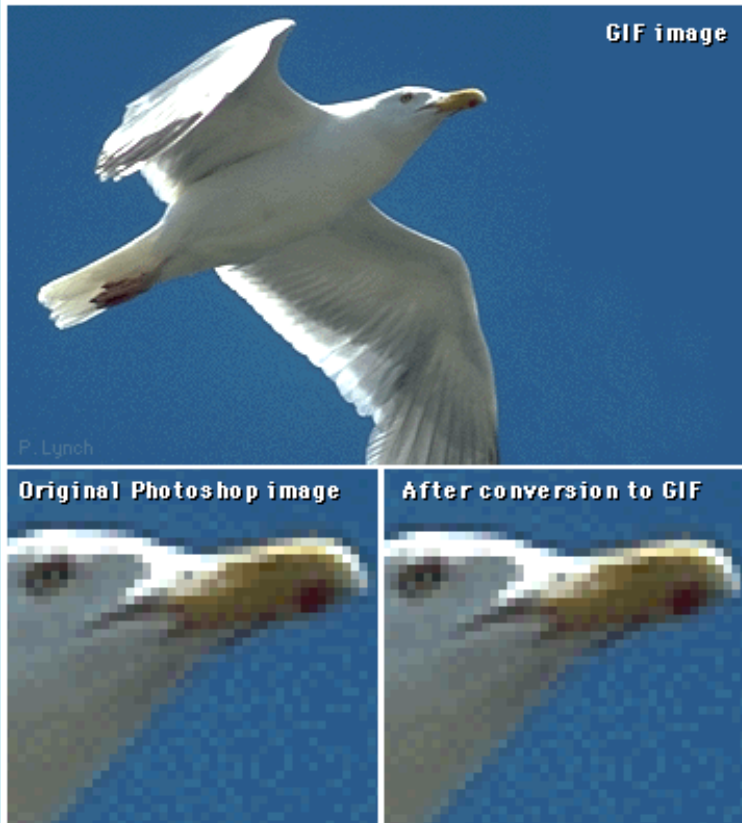
- Compression refers to **how** an image is saved in order to reduce the file size.
- The GREATER the compression, the lower the quality
- Two types:
 - Lossless
 - Reduces the file size without losing any pixel data
 - Quality is not compromised
 - Lossy
 - Alters and/or eliminates some data
 - The more the image is reduced, the more the quality is degraded

Question

- Apply you knowledge
- You have a graphic image that you want to send via email. Discuss your sending options using lossy and losless



Lossless Compression



Before Compression

After Compression

Notice that there is no difference, no data has been lost.

Lossy Compression

- Notice that each time the image is saved, the quality is degraded.
- In the third image, the image is very pixelated.



Original



Final compression

Portability

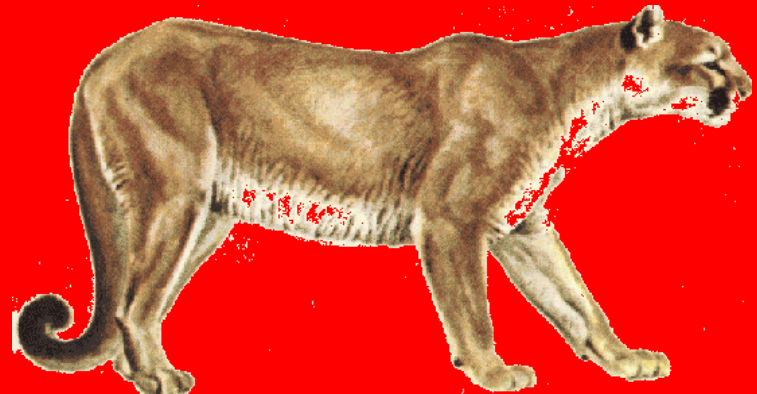
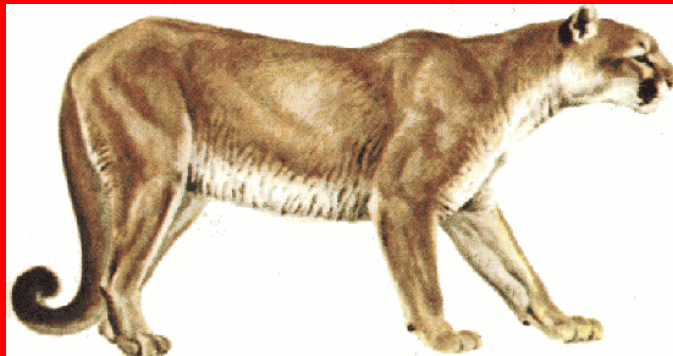
How easily you can open, modify, and view the files on computers using different operating systems, software and browsers.

Question:

Why would this be important when creating web pages?

Transparency

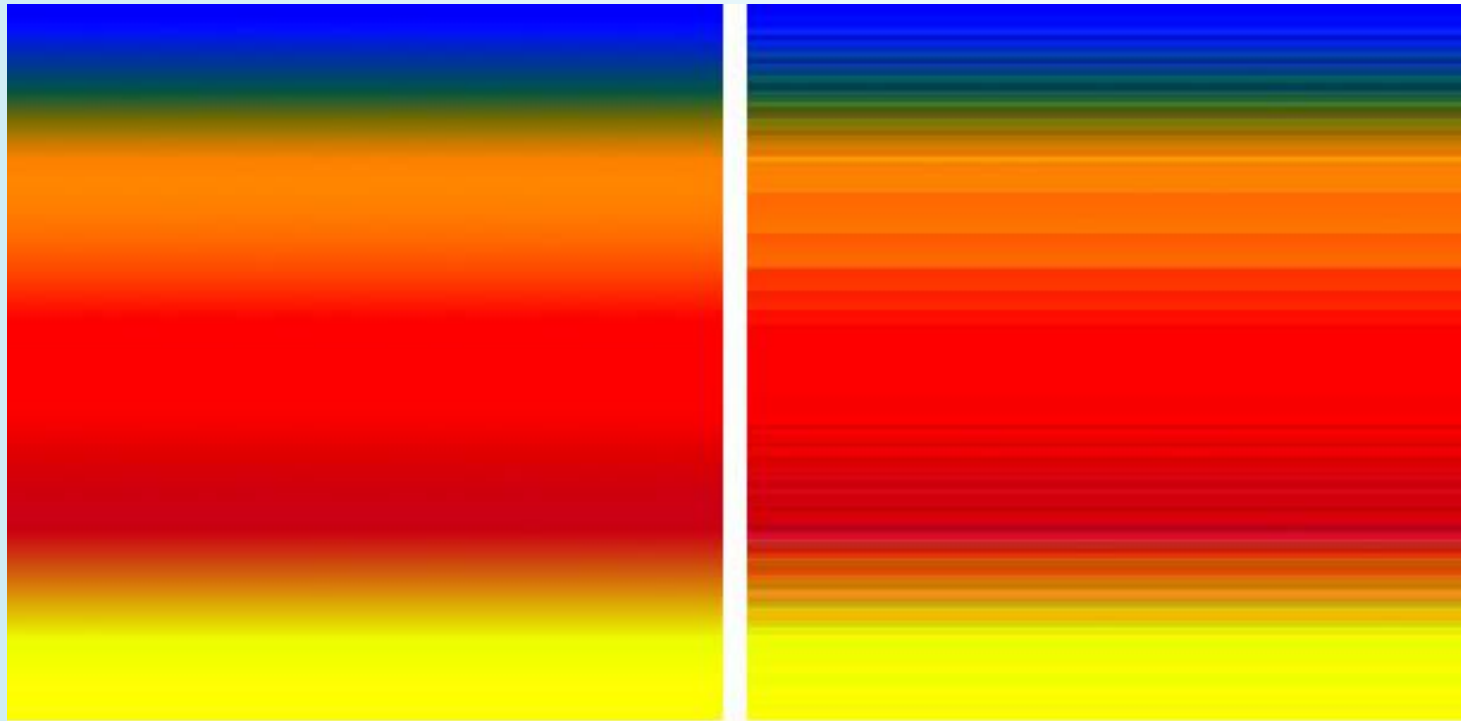
- Allows the background color of an image to be “eliminated” or made transparent so that the background behind the image can be seen.
- It makes part of the image invisible, or “see-through.”



Factors to Consider When Choosing a Graphic File Format

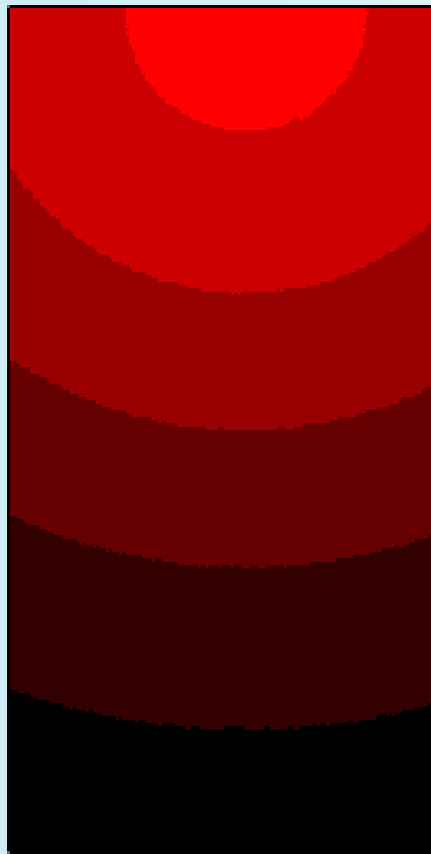
- Which file format is best for a particular application?
- How important is the quality of the image when transferred, copied, or displayed?
- How important is the speed at which the image transfers or loads?
- How important is file size?

8 bit vs 16 bit

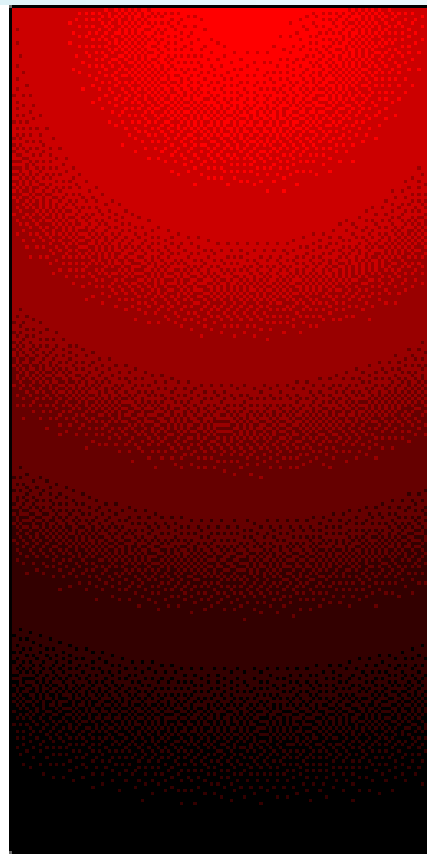


Identical gradients processed at different color depths, 16 bits per channel on the left, 8 bits per channel on the right. Processing included saturation boost (+51 percent), two applications of Gaussian Blur and two applications of Unsharp Mask.

8 bit to 64 bit



8-bit gradient



8-bit gradient,
dithered



24-bit gradient